Remarks

The Applicants appreciate the Examiner's review of currently pending Claims 5-13. Of these pending claims, only Claim 5 and Claim 10 are independent claims. Since the Applicants respectfully assert that these independent claims are allowable, claims that depend from Claim 5 and Claim 13 are also allowable. Thus, Applicants respectfully request favorable reconsideration in view of the subsequent remarks.

In the Office Action dated May 19, 2005 ("Office Action"), claims 5-8 and 10-13 were rejected under 35 U.S.C. 102(e) as being unpatentable over U.S. Patent No. 6,434,196 issued on August 13, 2002 to Sethuraman *et al.* ("Sethuraman patent"). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California,* 814 F.2d 628, 631 (Fed. Cir. 1987). Moreover, "every element of the claimed invention must be literally present, arranged as in the claim. ... The identical invention must be shown in as complete detail as is contained in the patent claim." *Richardson v. Suzuki Motor Company Co.* 868 F.2d 1226, 1236 (Fed. Cir. 1989). Since these requirements have not been met with regard to Claim 5 and Claim 10 as indicated below, the Applicants respectfully traverse this rejection.

Though asserted in the Office Action, the Sethuraman patent does not disclose all the limitations as arranged in the complete detail recited in Claim 5. This claim is to "a system for organizing a series of pictures in an input video stream into at least one group of pictures (GOP), comprising: a scene change detector operative to detect a change in the series of pictures **and** to classify a first picture following the scene change as a first intra-picture (I-picture) **and** to classify at least one other picture following the scene change as a predicted picture (P-picture) **and** to classify at least one second picture as a bi-directionally predicted picture (B-picture); **and** a bit allocation module operative

to determine whether a first GOP uses less than a predetermined target number of bits and further operative to allocate an unneeded bit to a second GOP in response to a determination that the first GOP uses less than the predetermined target number of bits." (emphasis added).

A scene change detector identical to the scene change detector of Claim 5 is not disclosed in the Sethuraman patent. Moreover, nothing in the cited sections identifies a scene change detector that classifies pictures as arranged in Claim 5. Instead, column 13, lines 40-47 (within the section cited by the Examiner) of the Sethuraman patent avoids "the encoding of closely proximate I-frames, such as may occur in response to a scene change." Even still, the Sethuraman patent discloses a sub-group of pictures (see column 13, line 44), which was defined as different from a group of pictures in column 3, lines 18-22. Because the Sethuraman patent does not disclose a scene change detector as recited in Claim 5, this claim cannot be anticipated by the Sethuraman patent. Thus, the anticipation rejection regarding Claim 5 and its dependent claims should be removed for at least the reason that the scene change detector limitation is missing from the Sethuraman patent.

Moreover, the anticipation rejection to Claim 5 must also fail because the Sethuraman patent does not disclose a scene change detector, as recited above, in combination with a bit allocation module. The text in the Office Action suggested that the scene change detector of Claim 5 was associated with FIG. 2C, and column 13, lines 36-53. While the remarks above indicate that this assertion is inaccurate, the anticipation rejection must fail because, assuming arguendo that FIG. 2C disclosed a scene change detector as recited in Claim 5, this figure does not describe bit allocation as a part of this method. In fact, "FIG. 2C depicts a flow diagram of a method for adaptively modifying....in response to the presence or absence of an information discontinuity (such as a scene change)." Column13, lines 36-40. Yet, nothing in either FIG. 2C or its corresponding description describes a bit allocation module as recited in Claim 5. In fact, the Examiner cited an adaptive rate control method 200 that is shown in

FIGs. 2A-2B and includes step 280 as the basis of the anticipation rejection to the bit allocation module limitation. However, nothing in these figures disclose a scene change detector, as described above. Therefore, the Sethuraman patent does not disclose a scene change detector in combination with a bit allocation module as recited in Claim 5.

For there to be anticipation, a single prior art reference must disclose the claim limitations with the same amount of detail in the same arrangement. The Sethurman patent does not disclose a system for organizing a series of pictures in an input video stream into at least one group of pictures that includes a scene change detector that detects a scene change **and** classifies pictures as recited in Claim 5. Moreover, this patent does not disclose a scene change detector **and**, or in combination with, a bit allocation module as recited in Claim 5. Hence, the Sethuraman patent cannot anticipate this claim or any of its dependent claims. Therefore, the Applicants respectfully request that the rejections of Claims 5-9 are removed.

Though asserted in the Office Action, the Sethuraman patent does not disclose all the limitations as arranged in the complete detail recited in Claim 10. Claim 10 is to an "encoding system for compressing an input video stream having a series of pictures, the encoding system comprising: a video encoder operative to receive the input video stream **and** an input control stream **and** to generate an encoded video stream; a picture grouping module operative to receive the input video stream **and** to generate at least one adaptive picture grouping for the pictures in the encoded video stream; a bit allocation module operative to receive the input video stream **and** to adaptively allocate bits among the series of pictures **and** to adaptively allocate bits among the adaptive picture groupings." (Emphasis added).

A video encoder, picture grouping module, and a bit allocation module as recited in Claim 10 are not disclosed in the Sethuraman patent. With respect to the video encoder, the Examiner asserted that

304048_8.DOC

this limitation is disclosed in column 3, lines 10-23. Yet, the recited section does not disclose a video encoder operative to receive the input video stream **and** an input control stream **and** to generate an encoded video stream. In fact, an input control stream is not mentioned in the cited section. Further, the picture grouping module recited in Claim 10 is not even mentioned in the Office Action. Thus, the Applicants can only conclude that Sethuraman patent does not disclose a video encoder in combination with a picture grouping module as recited in Claim 10. As a result, the Sethuraman patent cannot disclose a video encoder in combination with a picture grouping module in combination with a bit allocation module as recited in Claim 10. Therefore, the Sethuraman patent cannot anticipate Claim 10.

For there to be anticipation, a single prior art reference must disclose the claim limitations with the same amount of detail in the same arrangement. The Sethuraman patent does not disclose an encoding system for compressing an input video stream with a video encoder operative to receive the input video stream **and** an input control stream **and** to generate an encoded video stream as recited in Claim 10. The Sethuraman patent does not disclose this video encoder **and**, or in combination with, a picture grouping module operative to receive the input video stream **and** to generate at least one adaptive picture grouping for the pictures in the encoded video stream as recited in Claim 10. Moreover, the Sethuraman patent does not disclose this video encoder **and** this picture grouping module **and**, or in combination with, a bit allocation module operative to receive the input video stream **and** to adaptively allocate bits among the series of pictures **and** to adaptively allocate bits among the adaptive picture groupings as recited in Claim 10. Hence, the Sethuraman patent cannot anticipate this claim or any of its dependent claims. Therefore, the Applicants respectfully request that the rejections of Claims 10-13 are removed.

In the Office Action, Claim 9 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Sethuraman patent. Claim 9 indirectly depends from Claim 5, which means that all of the limitations
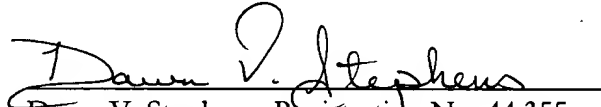
of Claim 5 are inherent within Claim 9. Since Claim 5 is allowable in light of the remarks above, Claim 9 is also allowable. Thus, the Applicants respectfully request that this rejection is removed.

In light of the above-mentioned remarks, Claims 5-13 are in a condition for allowance. Consequently, the Applicant respectfully requests that these claims are allowed and the current application is sent to issuance.

A fee of **$510.00** for a three-month extension of time filing fee is due. The Commissioner is hereby authorized to apply this fee and any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

NEEDLE & ROSENBERG, P.C.

Dawn V. Stephens, Registration No. 44,355

NEEDLE & ROSENBERG, P.C.
999 Peachtree Street
Suite 1000
Atlanta, Georgia 30309
(678) 420-9300 (telephone)
(678) 420-9301 (facsimile)

304048_8.DOC